MSD

November 4, 1996

Ms. Liza I. Montalvo
Remedial Project Manager
Kentucky/Tennessee Section
U. S. EPA
Region IV
345 Courtland Street, N. E.
Atlanta, GA 30365

Re: Results of Air Quality Monitoring - FY96 Fourth Quarter (FY96-4Q), (Event No. 15) Lees' Lane Superfund Site, Jefferson County, Kentucky Administrative Order on Consent, U. S. EPA Docket No. 91-32-C

Dear Ms. Montalvo:

In accordance with paragraph 11, under, Reporting Requirement, of the subject Consent Order and Attachment I, Operation and Maintenance Plan for Post-Removal Site Control at the Lees' Lane Landfill Site, Section 4.2, Air Quality Monitoring, attached for your information and files is one photocopy each of the following items, prepared by Radian Corporation, P. O. Box 13000, Research Triangle Park, North Carolina 27709, and received by MSD on October 29, 1996.

1. Radian Corporation letter, dated October 22, 1996, 2 pages.

2. Figure 1, Lees' Lane Landfill, Sampling Locations, 1 page.

3. Table 1, TO-14 Data Summary for Ambient Air Samples at the Lees' Lane Landfill, Sampling date: 05/22/96, 1 page.

4. Table 2, On-Site Meteorological Data, 05/22/96, 1 page.

5. Table 3, TO-14 Data Summary for Gas Monitoring Well Samples at Lee's Lane Landfill, Louisville, KY, Sampling Date: 05/22/96, 1 page.

Louisville and Jefferson County Metropolitan Sewer District
700 West Liberty Street Louisville, Kentucky 40203-1913 502-540-6000

Please advise if you have any questions concerning these sampling arrangements.

Sincerely,

Carl A. Neumayer
Director of Operations

CAN/dc
CAN3-5C

cc: Mr. Jeff Pratt, KNREPC,
Division of Waste Management
Mr. Rick Hogan, KNREPC
Division of Waste Management
G. R. Garner, Executive Director
File: WD-2 (Lees' Lane M & M Quarterly)

RADIAN INTERNATIONAL LLC
P.O. Box 13000
Research Triangle Park, NC 27709
(919) 461-1100
FAX (919) 461-1415

October 22, 1996

Mr. Dan Sammons
Chief Chemist
Louisville Metropolitan Sewer District
4522 Algonquin Parkway
Louisville, Kentucky 40211

Dear Dan:

Enclosed is the summary analytical report for the ambient and gas monitoring well samples collected at the Lee's Lane Landfill site on May 22, 1996.

A map of the site, labelled with the sample collection locations for your reference, is shown in Figure 1. Table 1 is a tabular summary for the ambient sample with the primary analytes required for submission to EPA. All primary analytes are at typical ambient levels.

The monitoring sites for this quarterly collection were chosen based on a combination of prevailing on-site meteorology and available sites in the adjacent residential neighborhood per the standard sampling protocol. It was a cool morning with a warm afternoon for most of the monitoring day with light and variable winds. The meteorological data is summarized in Table 2. The ambient samples were collected 3-5 feet above ground level. The ambient samples collected were integrated over a 7-8 hour collection period in Summa® canisters.

The methane analysis was performed by GC/FID on a separate analytical system prior to the TO-14 analysis at Radian's Perimeter Park Laboratory. The TO-14 analytical methodology using Gas Chromatography/Mass Spectrometry (GC/MS) was employed. Samples were handled with standard laboratory chain-of-custody procedures. Sample canisters and flow controllers were cleaned and blanked using Method TO-12 for total nonmethane hydrocarbons prior to field deployment. All ambient and gas well samples were successfully analyzed for methane and the TO-14 target analytes. No analytical difficulties were experienced with the gas well samples. The field blank indicates unexpected higher than normal background levels for the target analytes.

Table 3 is a tabular summary of the gas well samples with the primary analytes required for submission to EPA. The OVA was not used due to its erratic readings. The laboratory determined methane results are consistent for all the ambient air and the gas monitoring wells samples. The average ambient level of methane measured was 3.9 ppmv, while the methane level measured in the gas wells ranged from 3.08 to

10.97 ppmv. Lab analysis for methane was not done at well #1. The laboratory measured methane results are consistent with results from the past sampling periods.

With the exception of the primary target analytes, very few TO-14 compounds were detected in either the ambient or gas well samples. Benzene, toluene, xylene and methylene chloride were detected in all 12 field samples. All ambient and well samples were at normal levels.

Radian appreciates the opportunity to assist your staff with this project. Please advise me at (919) 461-1242 if you have any questions.

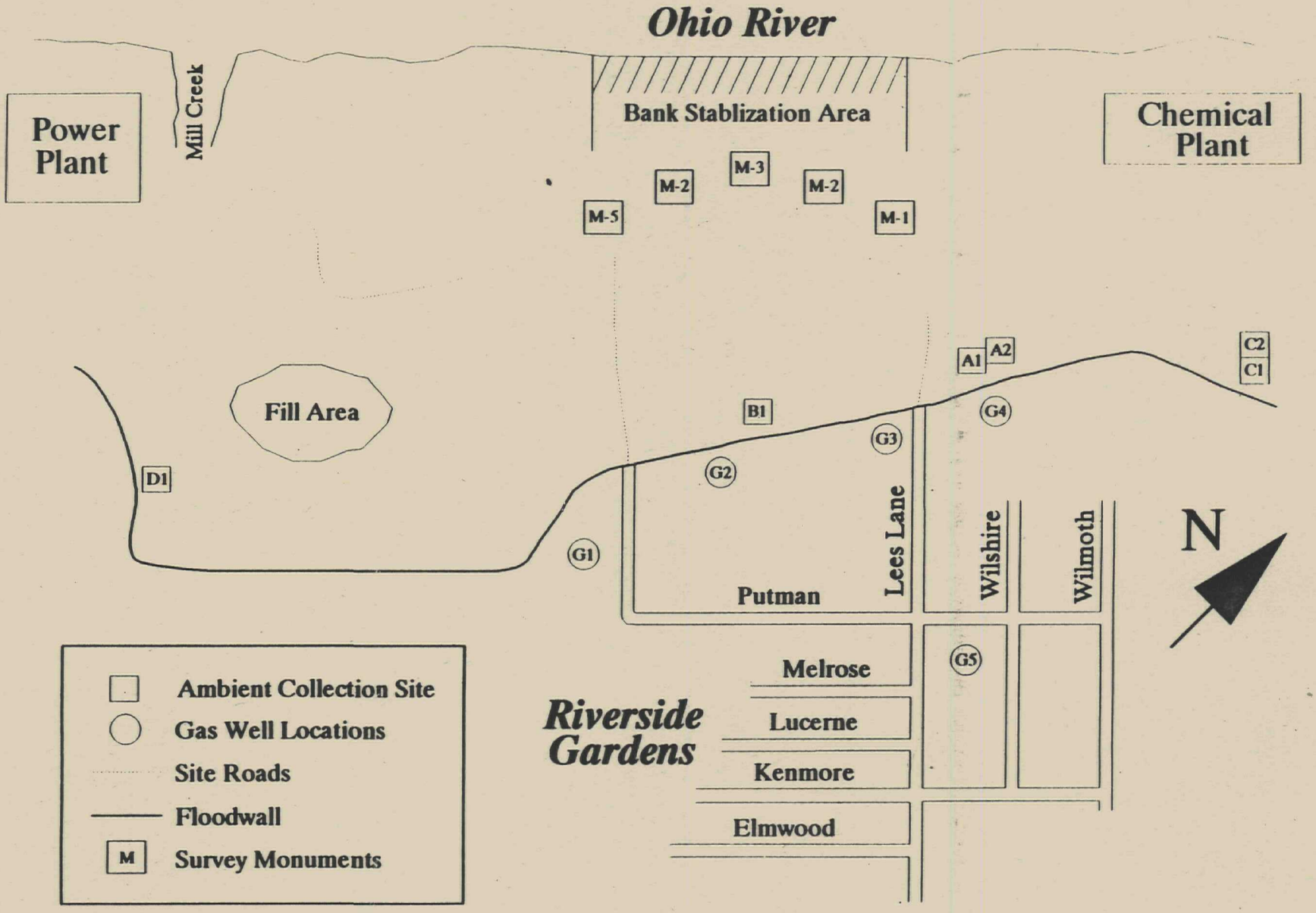
Sincerely,

Robert F. Jongleux
Senior Scientist/Project Manager

LMSD/Task 16

Attachments

cc: G.A. Holliden, Radian/LOU
Mike McCoy, Radian/RTP



Not to scale.

Figure 1. Lees Lane Landfill Sampling Locations

TABLE 1

TO-14 DATA SUMMARY FOR AMBIENT AIR SAMPLES AT THE LEES'S LANE LANDFILL LOUISVILLE, KENTUCKY

SAMPLING DATE: 05/22/96

Sample ID	AS-U1	AS-A1	AS-A2	AS-R1	AS-R2	AS-R3
Canister ID	2141	2133	2145	2140	2142	2135
Location	N/A	N/A	N/A	Residential	Residential	Residential
Dilution Factor	0.811	0.832	0.803	0.850	0.854	0.847
Compound (conc. in ppbv)						
Benzene	0.15	0.22	0.20	0.22	0.21	0.22
Toluene	0.43	0.67	0.64	0.49	0.64	0.63
Xylene (total)	0.25	0.49	0.46	0.43	0.29	0.38
Methylene Chloride	0.51	2.22	1.79	0.46	0.56	0.59
Vinyl Chloride	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methane (ppm)	3.40	3.76	5.52	3.50	3.68	3.57

Note: less than values indicate compound was at or below the analytical detection limit.

TABLE 2

ON-SITE METEOROLOGICAL DATA
May 22, 1996

Time	Barometric Pressure (in Hg)	Humidity (%)	Wind Direction From	Wind Speed (mph)	Observations
7:30	30.63	90	--	0	Clear
8:00	30.70	86	--	0	Clear
8:30	30.80	74	--	0	Clear
9:00	30.89	67	--	0	Clear
9:30	30.97	53	--	0	Clear
10:00	30.90	50	--	0	Clear
10:30	30.97	51	--	0	Clear
11:00	30.89	45	--	0	Clear
11:30	30.99	37	280°	2	Clear
12:00	30.99	32	260°	5	Clear
12:30	30.99	32	130°	6	Clear
13:00	30.99	32	130°	4	Clear
13:30	30.96	30	90°	1	Clear
14:00	30.96	25	50°	1	Clear
14:30	30.86	30	90°	1	Clear
15:00	30.89	30	95°	1	Clear
15:30	30.86	30	50°	1	Clear
16:00	30.87	30	140°	1	Clear

** Compiled by LMSD personnel at Lee's Lane Landfill Site **

TABLE 3

TO-14 DATA SUMMARY FOR GAS MONITORING WELL SAMPLES AT THE LEE'S LANE LANDFILL LOUISVILLE, KENTUCKY

SAMPLING DATE: **05/22/96**

Sample Id[a]	AS-G1L	AS-G2R	AS-G3R	AS-G4R	AS-G5LV	AS-G5L	FBL
Canister ID	2134	2136	2138	2146	2144	2143	2139
Dilution Factor	0.858	0.891	0.888	0.820	0.853	0.796	0.007
Orifice	D104	D3	B1	D8	D6	D33	--
Compound (conc. in ppbv)							
Benzene	0.15	0.12	0.09	0.05	0.25	0.25	4.29
Toluene	0.47	0.43	0.34	0.28	1.52	1.31	2.86
Xylene (total)	0.76	0.39	0.23	0.21	0.74	0.72	<0.01
Methylene Chloride	0.10	0.88	0.46	0.65	0.84	0.35	<1.43
Vinyl Chloride	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methane (ppm)	N/D	5.56	4.24	3.08	3.36	10.97	ND

[a]Wells have been painted, covering shallow and deep designations, therefore, right (R) and left (L) designations used for identification.

Note: Less than values indicate compound was at or below the detection limit